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NASA Procedural Requirements

COMPLIANCE IS MANDATORY**NPR 8580.1**Effective Date: November 26,
2001Expiration Date: November
26, 2008[Printable Format \(PDF\)](#)

Subject: Implementing The National Environmental Policy Act And Executive Order 12114

Responsible Office: Environmental Management Division

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CHAPTER 9. Environmental Resources Document

9.1 What is an Environmental Resources Document?

9.1.1 An Environmental Resources Document (ERD) is specific to NASA and not required by NEPA or by Council on Environmental Quality (CEQ) regulations. ERD's are addressed in NASA regulations at 14 CFR §1216.319.

9.1.2 The regulations require each NASA Center or major Component Facility to have an ERD to serve as a succinct baseline description of all environmental aspects of the operations of the facility at the time of the ERD's preparation. In effect, the ERD forms a baseline environment description against which the effects of subsequent proposed actions may be judged to determine significance. The local EMO is responsible for preparing, maintaining, and distributing the ERD.

9.1.3 The ERD, when completed, should be published in an appropriate NASA report series so that it is readily available for reference. NASA Headquarters/Environmental Management Division shall be provided with a copy of the completed ERD. The ERD should be updated continually as required by changing conditions (using page changes or other simple techniques); reviewed thoroughly at 5-year intervals; and revised, if necessary, to ensure adequacy. An ERD should conform to the following standard format, to the extent practicable.

9.2 Format and Content

9.2.1 The recommended content of an ERD is organized by environmental media (e.g., air and water) and by environmental topic (e.g., waste management and pesticide use). The environmental issues and concerns in the following standard format are illustrative rather than exhaustive. Additional topics should be included by a Center or major Component Facility, as appropriate.

9.2.1.1 Title Page

The Title Page would include all data required for citation purposes and the name, address, phone number, and electronic mail address of a contact at the Center or Component Facility for inquiries.

9.2.1.2 Table of Contents

The Table of Contents would include at least the section titles in the following paragraphs.

9.2.1.3 Description of Center or Component Facility-This section would include a discussion of the programs and activities conducted at the Center or Component Facility:

- a. An explicit, but brief, description of the location of the Center or Component Facility which includes the boundaries on all sides,
- b. A table that specifies the name, size, and unique features (implications for environmental health and safety) for all

major facilities along with a site map to indicate the location of such facilities, and

c. Resident or tenant agencies at the facility.

9.2.1.4 Air Resources-Meteorology of the site region and ambient air quality characteristics important to Clean Air Act compliance, including the 1990 Clean Air Act amendments and the General Conformity Rule would be provided along with:

a. A description of the climate, including relative humidity, mean and extreme temperature variation, surface wind variations, visibility, and precipitation,

b. A table that lists special requirements of the affected State and both Federal and State ambient air quality standards for air pollutants, including, but not limited to, the following: Sulfur dioxide (SO₂), particulates, nitrogen dioxide (NO₂), carbon monoxide (CO), ozone (O₃), and lead,

c. A brief general discussion of the current condition of air quality at the facility (a comparative discussion on each ambient standard) and with a table on major sources of air pollution at the Center or Component Facility and the nature of existing techniques for control, and

d. If a conformity analysis has been prepared for the Center or Component Facility, it should be summarized in the ERD.

9.2.1.5 Water Resources-This discussion would focus on both surface and groundwater resources at and in the vicinity of the Center and would include the following information:

a. A description of groundwater and surface water at the Center or Component Facility. This description should indicate whether any aquifer at the facility has been designated as the sole and principal drinking water source for the area under Section 1424(2)g of the Safe Drinking Water Act (42 U.S.C. §300f et seq.); whether there are groundwater pollution sources (e.g., deep well injection); and whether there are rivers in the area designated as wild, scenic, or recreations under the Wild and Scenic Rivers Act or designated as having the potential for inclusion under the Act.

b. A table that lists both Federal- and State-regulated water quality parameters, including, but not limited to, biochemical oxygen demand, total suspended solids, pH, fecal coliform, oils and grease, and temperature.

c. A brief general discussion of the current condition of water quality at the Center or Component Facility, including each water quality parameter. Major sources of water pollution should be identified, along with the nature of existing techniques for control and the status of any National Pollution Discharge Elimination System (NPDES) permit.

9.2.1.6 Land Resources-This section would describe the physical environment at the Center or Component Facility, as well as current and planned land uses and would include:

a. A description of topography (slope of terrain and elevation), geology, seismology, soils, and drainage.

b. A discussion of land use plans, policies, and controls, including any cooperation or participation with State, local, and regional agencies in coastal zone management and planning; the extent to which activities are consistent with existing State coastal zone management plans; and the existence of prime and unique farmlands at or in the vicinity of the Center or Component Facility and the extent to which existing or future activities at the facility may threaten their continued use.

c. A general discussion of the current policies and procedures for landscaping management. Describe initiatives and practices to implement the five fundamental landscaping principles to

(1) use regionally native plants, (2) design, use, or promote construction practices that minimize adverse effects on the natural habitat, (3) seek pollution prevention, (4) implement water efficient practices, and (5) create demonstration projects.

9.2.1.7 Biotic Resources- This section would characterize the ecology of the NASA Center or Component Facility and include the following:

a. A description of plants and animals in the area of impact along with a description of unique and important habitats and sensitive food chains, and

b. A generalized vegetation map of the entire facility and a brief discussion of the vegetation.

9.2.1.8 Endangered Species-This section focuses on Federal- and State-listed threatened and endangered animals and plants, as well as species proposed for listing, and areas of critical habitat at the Center or Component Facility. The following information would be included:

a. A table listing both federally designated and proposed and State designated endangered or threatened species in the area of impact, and

b. A brief description of those endangered or threatened species, their ranges, habitats, life history and ecology,

unique characteristics, basis for status classification, and species status.

9.2.1.9 Wetlands and Floodplains- This section would include the following:

- a. A base floodplain map of the Center or Component Facility that delineates both the 100-year and 500-year floodplains and a map showing identified wetland areas,
- b. A brief discussion of activities currently located in floodplain or wetlands and existing measures to minimize harm to lives, property, and the natural and beneficial values of floodplains and wetlands, and
- c. Wetlands banking program, if appropriate.

9.2.1.10 Solid Waste Generation, Treatment, Storage, and Disposal-This section would include the following discussion:

- a. A table that identifies the name and current and projected quantities of garbage, refuse, sludges, and other discarded materials, including liquids, semisolids, and contained gases from industrial sources and indicate whether such waste is hazardous or nonhazardous,
- b. A brief description of the Center or Component Facility's management control system for hazardous and toxic waste and a description of current disposal and management practices for nonhazardous waste, and
- c. A description of the pollution prevention plan, noting key initiatives planned or underway for reducing releases of pollutants from facility operations.

9.2.1.11 Toxic Substances-The exposure standards and effluent limits under the Clean Water Act and Clean Air Act would be discussed in this section, including:

- a. Descriptions of the management programs implemented for the Toxic Substances Control Act (TSCA),
- b. A table that lists standards and prohibitions for hazardous air pollutants, such as vinyl chloride, asbestos, beryllium, and mercury, and standards and prohibitions for toxic water pollutants, such as polychlorinated biphenyl (PCB), benzidine, aldrin/dieldrin, dichlorodiphenyltrichloroethane (commonly referred to as DDT), and other pesticides-if they are present or discharged at the Center or Component Facility, and
- c. A table that identifies the quantities and major sources of these pollutants and describes the nature of existing techniques for control.

9.2.1.12 Pesticides-A brief discussion of current policies and procedures for integrated pest management would include a description of:

- a. Initiatives to reduce pesticide use,
- b. Management practices for permitting, training, storage, and disposal of regulated pesticides, and
- c. A list of pesticides commonly used.

9.2.1.13 Radioactive Materials and Non-Ionizing Radiation-This section should include a table that identifies the type of radiation, potential population exposed, source of the radiation, degree of hazard, and nature of control techniques. (Sources of such radiation include, but are not limited to, nuclear materials, radio transmitters, radar transmitters, lasers, and electromagnetic fields from high voltage utility facilities.)

9.2.1.14 Noise, Sonic Boom, and Vibration-A table or figure that identifies the major sources, levels, population affected, and any clarifying remarks regarding noise, sonic boom, and vibration would be included in this section. Noise contours are encouraged.

9.2.1.15 Historical, Archaeological, and Cultural Factors-This section would provide the following:

- a. A description of the historical setting, a list of historical and archaeological resources at or in the vicinity of the Center or Component Facility, and a list of properties (in the vicinity) that are National Historic Landmarks or are listed in or may be eligible for listing in the National Register of Historic Places, and
- b. A description of schools, hospitals, churches, social focus, recreational opportunities, and facilities in the vicinity.

9.2.1.16 Economic, Population, and Employment Factors-This section would include the following:

- a. A description of population density, composition, and distribution, and
- b. A reference to the Center or Component Facility Environmental Justice Implementation Plan, providing summary information on minority and low income populations around the Center, and
- c. A description of police and fire protection, health services, public transportation, nature of traffic, and transportation route, and

d. A description of the general nature of employment opportunities and general size and nature of labor force.

9.2.1.17 Special Land Uses in the Vicinity of the Center or Component Facility-The Center or Component Facility location relative to the following special land uses would be identified in this section:

- a. Wildlife refuges,
- b. National seashores,
- c. Wild and scenic rivers,
- d. National and State parks, and
- e. Hospitals.

9.2.1.18 Definitions, Abbreviations, and Conversion Factors

9.2.1.19 Index

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